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                   INPADOC
 NEWS 11  JUN 26   TULSA/TULSA2 reloaded and enhanced with new search and
                   and display fields
 NEWS 12  JUN 28   Price changes in full-text patent databases EPFULL and PCTFULL
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=> file medline, biotechds, biosis, wpids, fsta, jicst, hcaplus, embase, dgene,
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=> s (aedes aegypti sterol carrier protein-2) or (AeSCP-2)
L1 23 (AEDES AEGYPTI STEROL CARRIER PROTEIN-2) OR (AESCP-2)

=> d l1 ti abs ibib tot

L1 ANSWER 1 OF 23 MEDLINE on STN
TI Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito, Aedes aegypti.
AB The effect of gene expression knockdown was used to study the function of the sterol carrier protein-2 (AeSCP-2) in the yellow fever mosquito, Aedes aegypti. Injection of small double stranded AeSCP-2 RNAs into mosquito larvae resulted in the knockdown of gene products. The lack of AeSCP-2 in larvae coincided with a reduction in accumulated cholesterol in pupae, supporting the hypothesis that AeSCP-2 may be involved in cholesterol uptake in mosquito larvae. Knockdown of AeSCP-2 caused a high mortality rate in developing adult and reduced egg viability. Results from this study indicate that AeSCP-2 is important for adult development and for the viability of the eggs.
ACCESSION NUMBER: 2005283088 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15926899
TITLE: Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito, Aedes aegypti.
AUTHOR: Blitzer E J; Vyazunova I; Lan Q
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI 53706, USA.
SOURCE: Insect molecular biology, (2005 Jun) Vol. 14, No. 3, pp. 301-7.
Journal code: 9303579. ISSN: 0962-1075.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507

ENTRY DATE: Entered STN: 2 Jun 2005
Last Updated on STN: 9 Jul 2005
Entered Medline: 8 Jul 2005

L1 ANSWER 2 OF 23 MEDLINE on STN
TI Identification of mosquito sterol carrier protein-2 inhibitors.
AB A mosquito sterol carrier protein-2, AeSCP-2, has been shown to aid in the uptake of cholesterol in mosquito cells. The discovery of chemical inhibitors of AeSCP-2 is reported here. AeSCP-2 inhibitors (SCPIs) belong to several chemotypes of hydrophobic compounds. Those inhibitors competed with cholesterol for AeSCP-2, binding with relatively high binding affinities. In cultured insect cells, SCPIs reduced cholesterol uptake by as much as 30% at 1-5 microM concentrations. SCPIs were potent larvicides to the yellow fever mosquito, Aedes aegypti, and to the tobacco hornworm, Manduca sexta, with 50% lethal doses (LD50s) of 5-21 microM and 0.013-15 ng/mg diet, respectively. The results indicate that sterol carrier protein-2 has functional similarity in two different insect species.
ACCESSION NUMBER: 2005140282 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15627652
TITLE: Identification of mosquito sterol carrier protein-2 inhibitors.
AUTHOR: Kim Min-sik; Wessely Vilena; Lan Que
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, Wisconsin, USA.
SOURCE: Journal of lipid research, (2005 Apr) Vol. 46, No. 4, pp. 650-7. Electronic Publication: 2005-01-01.
Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507
ENTRY DATE: Entered STN: 18 Mar 2005
Last Updated on STN: 16 Jul 2005
Entered Medline: 15 Jul 2005

L1 ANSWER 3 OF 23 MEDLINE on STN
TI Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AB Subcellular distribution of Aedes aegypti sterol carrier protein-2 (AeSCP-2) and AeSCP-x was studied using electron microscopy. In both cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected mostly in the cytosol, with some labeling mitochondria and nucleus, but not in membranous vesicles. The widespread distribution of AeSCP-2 in the midgut epithelium is consistent with its potential lipid transfer function in all phases of cholesterol absorption. In contrast, AeSCP-x was found mostly in the peroxisome. Differences in the subcellular distribution of AeSCP-2 and AeSCP-x suggest that these two members of the SCP-2 gene family are functionally distinct. Overexpression of AeSCP-2 in A. aegypti cells showed increased localization of AeSCP-2 to cytosol, mitochondria, and nucleus. This is the first report on the nuclear distribution of an SCP. Overexpression of AeSCP-2 resulted in increased cholesterol incorporation in cells, suggesting that AeSCP-2 enhances cholesterol uptake.

ACCESSION NUMBER: 2004351261 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15145982

TITLE: Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AUTHOR: Lan Que; Massey Randall J
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI 53706, USA.. qlan@entomology.wisc.edu
SOURCE: Journal of lipid research, (2004 Aug) Vol. 45, No. 8, pp. 1468-74. Electronic Publication: 2004-05-16.
Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200502
ENTRY DATE: Entered STN: 16 Jul 2004
Last Updated on STN: 9 Feb 2005
Entered Medline: 8 Feb 2005

bad date

L1 ANSWER 4 OF 23 MEDLINE on STN
TI Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.
AB Trafficking of cholesterol in insects is a very important process due to the fact that insects depend on dietary cholesterol to fulfil their physiological needs. We identified a putative mosquito sterol carrier protein-2 (SCP-2) cDNA from fourth instar subtracted cDNA library. The AeSCP-2 protein has high degree homology in the sterol transfer domain to both rat and human SCP-2. Transcripts of AeSCP -2 in fourth instars were detected strongly in the midgut, and weakly in the head and hindgut. In the early pupae, AeSCP-2 transcription was observed in the thorax, head and body wall of abdomen, but not in the gut. The interaction of mosquito sterol carrier protein-2 (AeSCP-2) with cholesterol was examined. The Kd of purified recombinant AeSCP-2 to cholesterol was 5.6 +/- 0.6 x 10-9 m using radiolabelled cholesterol-binding assay. The results suggest that AeSCP-2 has high affinity to cholesterol and may function as a carrier protein in mosquitoes.
ACCESSION NUMBER: 2003036500 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12542635
TITLE: Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.
AUTHOR: Krebs K C; Lan Q
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI 53076, USA.
SOURCE: Insect molecular biology, (2003 Feb) Vol. 12, No. 1, pp. 51-60.
Journal code: 9303579. ISSN: 0962-1075.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200304
ENTRY DATE: Entered STN: 25 Jan 2003
Last Updated on STN: 4 Apr 2003
Entered Medline: 3 Apr 2003

Applicant considered

L1 ANSWER 5 OF 23 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide;
recombinant protein production via plasmid expression in host cell for use in drug screenin
AN 2004-26494 BIOTECHDS

AB DERWENT ABSTRACT:
NOVELTY - An isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide (I) comprising an amino acid sequence at least 85% identical to a fully defined sequence of 110 amino acids (S1) as given in the specification, or its biologically-active fragment capable of intracellular cholesterol transport, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) an isolated and purified nucleic acid (II) specifically hybridizing under stringent conditions to either strand of a denatured, double-stranded nucleic acid encoding (S1); (2) an expression vector (III) comprising (II); (3) a transformed host cell or organism (IV) comprising (II); and (4) preparing (I).

BIOTECHNOLOGY - Preparation: (I) is produced by culturing (IV) under conditions conducive to expression of (I), and recovering the expressed polypeptide from (IV) in isolated and purified form (claimed). Preferred Polypeptide: In (I), the amino acid sequence is (S1). Preferred Nucleic Acid: In (II), the denatured, double-stranded nucleic acid encoding (S1), is the nucleotide sequence comprising a fully defined sequence of 333 base pairs as given in the specification.

USE - (I) is useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity, which involves incubating (I) comprising (S1) or its biologically-active fragment with a biological target in the presence of a compound, and measuring the ability of the compound to enhance or block the interaction between (I) or its fragment and the biological target, thus identifying an agonist or antagonist effective in altering AeSCP-2 biological activity, where the biological target is cholesterol and the AeSCP-2 biological activity is cholesterol transport.
(I) is useful for identifying compounds which bind to or interact with (I) or its fragments, which involves contacting (I) or its fragment with a compound to be screened under conditions to permit binding to or interaction between the compound and (I) or its fragment to assess the binding to or interaction with the compound, where the binding or interaction is associated with a detectable signal in response to the binding or interaction of (I) or its fragment with the compound, and determining whether the compound binds to or interacts with (I) or its fragment by detecting the presence or absence of the signal generated from the binding or interaction of the compound with (I) or its fragment (claimed).

ADVANTAGE - (I) is capable of intracellular cholesterol transport in mosquitoes.

EXAMPLE - Preparation of recombinant Aedes aegypti sterol carrier protein-2 (rAeSCP-2) polypeptide was carried out as follows. To produce rAeSCP-2 the entire coding region of the AeSCP-2 gene was cloned into the pGEX-4T glutathione-S-transferase (GST) tag vector. Sequence analysis was performed to confirm that the fusion protein was in frame with GST. The GST/AeSCP-2 fusion protein was purified on a GST affinity column and the GST tag was removed by digesting with thrombin. The vector was introduced into bacterial cells. The bacterial culture was incubated overnight at 18degreesC after addition of isopropyl-beta-D-thiogalactopyranoside (IPTG) (0.2 mM). The predicted molecular weight of AeSCP-2 was 12.3 kDa and the purified rAeSCP-2 was 13 kDa estimated on the sodium dodecyl sulfate- polyacrylamide gel electrophoresis (SDS-PAGE). Thrombin was removed from eluted rAeSCP-2 by passing through a benzamidine column. The fusion protein (100 mg) from cultures (2.5 l) was obtained. Purified AeSCP-2 was concentrated to 8.1 mg/ml in phosphate buffered saline (PBS), pH 7.4, and stored in PBS at -80degreesC. (23 pages)

ACCESSION NUMBER: 2004-26494 BIOTECHDS
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2

polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide; recombinant protein production via plasmid expression in host cell for use in drug screenin

AUTHOR: LAN Q; KREBS K C
PATENT ASSIGNEE: WISCONSIN ALUMNI RES FOUND
PATENT INFO: US 2004211865 28 Oct 2004
APPLICATION INFO: US 2004-823203 13 Apr 2004
PRIORITY INFO: US 2004-823203 13 Apr 2004; US 2003-465648 25 Apr 2003
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-765537 [75]

L1 ANSWER 6 OF 23 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Identification of mosquito sterol carrier protein-2 inhibitors.
AB A mosquito sterol carrier protein-2, AeSCP-2, has been shown to aid in the uptake of cholesterol in mosquito cells. The discovery of chemical inhibitors of AeSCP-2 is reported here. AeSCP-2 inhibitors (SCPIs) belong to several chemotypes of hydrophobic compounds. Those inhibitors competed with cholesterol for AeSCP-2, binding with relatively high binding affinities. In cultured insect cells, SCPIs reduced cholesterol uptake by as much as 30% at 1-5 mu M concentrations. SCPIs were potent larvicides to the yellow fever mosquito, Aedes aegypti, and to the tobacco hornworm, Manduca sexta, with 50% lethal doses (LD(50)s) of 5-21 mu M and 0.013-15 ng/mg diet, respectively. The results indicate that sterol carrier protein-2 has functional similarity in two different insect species.
ACCESSION NUMBER: 2005:507198 BIOSIS
DOCUMENT NUMBER: PREV200510305335
TITLE: Identification of mosquito sterol carrier protein-2 inhibitors.
AUTHOR(S): Kim, Min-sik; Wessely, Vilena; Lan, Que [Reprint Author]
CORPORATE SOURCE: Univ Wisconsin, Dept Entomol, Madison, WI 53706 USA qlan@entomology.wisc.edu
SOURCE: Journal of Lipid Research, (APR 2005) Vol. 46, No. 4, pp. 650-657.
CODEN: JLPRAW. ISSN: 0022-2275.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Nov 2005
Last Updated on STN: 23 Nov 2005

L1 ANSWER 7 OF 23 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito, Aedes aegypti.
AB The effect of gene expression knockdown was used to study the function of the sterol carrier protein-2 (AeSCP-2) in the yellow fever mosquito, Aedes aegypti. Injection of small double stranded AeSCP-2 RNAs into mosquito larvae resulted in the knockdown of gene products. The lack of AeSCP-2 in larvae coincided with a reduction in accumulated cholesterol in pupae, supporting the hypothesis that AeSCP-2 may be involved in cholesterol uptake in mosquito larvae. Knockdown of AeSCP-2 caused a high mortality rate in developing adult and reduced egg viability. Results from this study indicate that AeSCP-2 is important for adult development and for the viability of the eggs.
ACCESSION NUMBER: 2005:333848 BIOSIS
DOCUMENT NUMBER: PREV200510123900
TITLE: Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito,

Aedes aegypti.
AUTHOR(S): Blitzer, E. J.; Vyazunova, I.; Lan, Q. [Reprint Author]
CORPORATE SOURCE: Univ Wisconsin, Dept Entomol, Madison, WI 53706 USA
qlan@entomology.wisc.edu
SOURCE: Insect Molecular Biology, (JUN 2005) Vol. 14, No. 3, pp. 301-307.
ISSN: 0962-1075.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 31 Aug 2005
Last Updated on STN: 31 Aug 2005

L1 ANSWER 8 OF 23 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AB Subcellular distribution of Aedes aegypti sterol carrier protein-2 (AeSCP-2) and AeSCP-x was studied using electron microscopy. In both cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected mostly in the cytosol, with some labeling mitochondria and nucleus, but not in membranous vesicles. The widespread distribution of AeSCP-2 in the midgut epithelium is consistent with its potential lipid transfer function in all phases of cholesterol absorption. In contrast, AeSCP-x was found mostly in the peroxisome. Differences in the subcellular distribution of AeSCP-2 and AeSCP-x suggest that these two members of the SCP-2 gene family are functionally distinct. Overexpression of AeSCP-2 in A. aegypti cells showed increased localization of AeSCP-2 to cytosol, mitochondria, and nucleus. This is the first report on the nuclear distribution of an SCP. Overexpression of AeSCP-2 resulted in increased cholesterol incorporation in cells, suggesting that AeSCP-2 enhances cholesterol uptake.-Lan, Q., and R. J. Massey. Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
ACCESSION NUMBER: 2004:404206 BIOSIS
DOCUMENT NUMBER: PREV200400408392
TITLE: Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AUTHOR(S): Lan, Que [Reprint Author]; Massey, Randall J.
CORPORATE SOURCE: Dept Entomol, Univ Wisconsin, Madison, WI, 53706, USA
qlan@entomology.wisc.edu
SOURCE: Journal of Lipid Research, (August 2004) Vol. 45, No. 8, pp. 1468-1474. print.
CODEN: JLPRAW. ISSN: 0022-2275.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Oct 2004
Last Updated on STN: 20 Oct 2004

L1 ANSWER 9 OF 23 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.
AB Trafficking of cholesterol in insects is a very important process due to the fact that insects depend on dietary cholesterol to fulfil their physiological needs. We identified a putative mosquito sterol carrier protein-2 (SCP-2) cDNA from fourth instar subtracted cDNA library. The AeSCP-2 protein has high degree homology in the sterol transfer domain to both rat and human SCP-2. Transcripts of AeSCP -2 in fourth instars were detected strongly in the midgut, and weakly in the head and hindgut. In the early pupae, AeSCP-2 transcription was observed in the thorax, head and body wall of abdomen, but not in the gut. The interaction of mosquito sterol carrier

protein-2 (AeSCP-2) with cholesterol was examined. The Kd of purified recombinant AeSCP-2 to cholesterol was 5.6+-0.6X10-9 M using radiolabelled cholesterol-binding assay. The results suggest that AeSCP-2 has high affinity to cholesterol and may function as a carrier protein in mosquitoes.

ACCESSION NUMBER: 2003:119677 BIOSIS
DOCUMENT NUMBER: PREV200300119677
TITLE: Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.
AUTHOR(S): Krebs, K. C.; Lan, Q. [Reprint Author]
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI, 53706, USA
qlan@entomology.wisc.edu
SOURCE: Insect Molecular Biology, (February 2003) Vol. 12, No. 1, pp. 51-60. print.
ISSN: 0962-1075 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Mar 2003
Last Updated on STN: 5 Mar 2003

L1 ANSWER 10 OF 23 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN 2004-765537 [75] WPIDS
AB US2004211865 A UPAB: 20041122
NOVELTY - An isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide (I) comprising an amino acid sequence at least 85% identical to a fully defined sequence of 110 amino acids (S1) as given in the specification, or its biologically-active fragment capable of intracellular cholesterol transport, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) an isolated and purified nucleic acid (II) specifically hybridizing under stringent conditions to either strand of a denatured, double-stranded nucleic acid encoding (S1);

(2) an expression vector (III) comprising (II);

(3) a transformed host cell or organism (IV) comprising (II); and

(4) preparing (I).

USE - (I) is useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity, which involves incubating (I) comprising (S1) or its biologically-active fragment with a biological target in the presence of a compound, and measuring the ability of the compound to enhance or block the interaction between (I) or its fragment and the biological target, thus identifying an agonist or antagonist effective in altering AeSCP-2 biological activity, where the biological target is cholesterol and the AeSCP-2 biological activity is cholesterol transport.

(I) is useful for identifying compounds which bind to or interact with (I) or its fragments, which involves contacting (I) or its fragment with a compound to be screened under conditions to permit binding to or interaction between the compound and (I) or its fragment to assess the binding to or interaction with the compound, where the binding or interaction is associated with a detectable signal in response to the binding or interaction of (I) or its fragment with the compound, and determining whether the compound binds to or interacts with (I) or its fragment by detecting the presence or absence of the signal generated from the binding or interaction of the compound with (I) or its fragment (claimed).

ADVANTAGE - (I) is capable of intracellular cholesterol transport in mosquitoes.

Dwg.0/7
ACCESSION NUMBER: 2004-765537 [75] WPIDS
DOC. NO. NON-CPI: N2004-603943
DOC. NO. CPI: C2004-268343
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): KREBS, K C; LAN, Q
PATENT ASSIGNEE(S): (WISC) WISCONSIN ALUMNI RES FOUND
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2004211865	A1	20041028	(200475)*		23

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004211865	A1 Provisional	US 2003-465648P	20030425
		US 2004-823203	20040413

PRIORITY APPLN. INFO: US 2003-465648P 20030425; US 2004-823203 20040413

L1 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito, Aedes aegypti
AB The effect of gene expression knockdown was used to study the function of the sterol carrier protein-2 (AeSCP-2) in the yellow fever mosquito, Aedes aegypti. Injection of small double stranded AeSCP-2 RNAs into mosquito larvae resulted in the knockdown of gene products. The lack of AeSCP-2 in larvae coincided with a reduction in accumulated cholesterol in pupae, supporting the hypothesis that AeSCP-2 may be involved in cholesterol uptake in mosquito larvae. Knockdown of AeSCP-2 caused a high mortality rate in developing adult and reduced egg viability. Results from this study indicate that AeSCP-2 is important for adult development and for the viability of the eggs.
ACCESSION NUMBER: 2005:524541 HCAPLUS
DOCUMENT NUMBER: 143:150118
TITLE: Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito, Aedes aegypti
AUTHOR(S): Blitzer, E. J.; Vyazunova, I.; Lan, Q.
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI, USA
SOURCE: Insect Molecular Biology (2005), 14(3), 301-307
CODEN: IMBIE3; ISSN: 0962-1075
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN

TI Identification of mosquito sterol carrier protein-2 inhibitors

AB A mosquito sterol carrier protein-2, AeSCP-2, has been shown to aid in the uptake of cholesterol in mosquito cells. The discovery of chemical inhibitors of AeSCP-2 by chemical library screening is reported here. AeSCP-2 inhibitors (SCPIs) belong to several chemotypes of hydrophobic compds. Those inhibitors competed with cholesterol for AeSCP-2 , binding with relatively high binding affinities. In cultured insect cells, SCPIs reduced cholesterol uptake by as much as 30% at 1-5 μM concns. SCPIs were potent larvicides to the yellow fever mosquito, Aedes aegypti, and to the tobacco hornworm, Manduca sexta, with 50% LDs (LD50s) of 5-21 μM and 0.013-15 ng/mg diet, resp. The results indicate that sterol carrier protein-2 has functional similarity in two different insect species.

ACCESSION NUMBER: 2005:452374 HCAPLUS
DOCUMENT NUMBER: 143:73236
TITLE: Identification of mosquito sterol carrier protein-2 inhibitors
AUTHOR(S): Kim, Min-sik; Wessely, Vilena; Lan, Que
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI, USA
SOURCE: Journal of Lipid Research (2005), 46(4), 650-657
CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER: American Society for Biochemistry and Molecular Biology, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN

TI Protein and cDNA sequences of sterol carrier protein-2 gene from yellow fever mosquito, Aedes aegypti

AB The invention provides the protein and cDNA sequences of sterol carrier protein-2 (AeSCP-2) isolated from Aedes aegypti. Also provided are methods for utilizing AeSCP-2 polypeptides to screen for compds. exhibiting antagonist or agonist activity toward AeSCP-2 biol. activity, in particular, cholesterol transport. Tissue distribution of AeSCP-2 changed through development. In larvae, AeSCP-2 transcription was at high and low levels in the gut and head, resp. Early pupae transcribed AeSCP-2 gene in the body wall of both thorax and abdomen in contrast to the very low level of mRNA in the body wall of larvae. AeSCP-2 is the first putative intracellular cholesterol transporting protein reported in insects. The transcriptional profiles and tissue distribution of AeSCP-2 mRNA suggest that AeSCP-2 may be involved in cholesterol absorption/intracellular transfer and ecdysteroid biosynthesis. The results from direct binding of [3H] cholesterol showed that AeSCP-2 has high affinity to cholesterol. Thus, it provided strong evidence that AeSCP-2 functions as a cholesterol transporter in mosquitoes.

ACCESSION NUMBER: 2004:905240 HCAPLUS
DOCUMENT NUMBER: 141:375527
TITLE: Protein and cDNA sequences of sterol carrier protein-2 gene from yellow fever mosquito, Aedes aegypti
INVENTOR(S): Lan, Que; Krebs, Kendall C.
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004211865	A1	20041028	US 2004-823203		20040413
PRIORITY APPLN. INFO.:			US 2003-465648P	P	20030425

L1 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x
AB Subcellular distribution of Aedes aegypti sterol carrier protein-2 (AeSCP-2) and AeSCP-x was studied using electron microscopy. In both cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected mostly in the cytosol, with some labeling mitochondria and nucleus, but not in membranous vesicles. The widespread distribution of AeSCP-2 in the midgut epithelium is consistent with its potential lipid transfer function in all phases of cholesterol absorption. In contrast, AeSCP-x was found mostly in the peroxisome. Differences in the subcellular distribution of AeSCP-2 and AeSCP-x suggest that these two members of the SCP-2 gene family are functionally distinct. Overexpression of AeSCP-2 in A. aegypti cells showed increased localization of AeSCP-2 to cytosol, mitochondria, and nucleus. This is the first report on the nuclear distribution of an SCP. Overexpression of AeSCP-2 resulted in increased cholesterol incorporation in cells, suggesting that AeSCP-2 enhances cholesterol uptake.

ACCESSION NUMBER:	2004:654002 HCAPLUS
DOCUMENT NUMBER:	141:346661
TITLE:	Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x
AUTHOR(S):	Lan, Que; Massey, Randall J.
CORPORATE SOURCE:	Department of Entomology, University of Wisconsin-Madison, Madison, WI, 53706, USA
SOURCE:	Journal of Lipid Research (2004), 45(8), 1468-1474 CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER:	American Society for Biochemistry and Molecular Biology, Inc.
DOCUMENT TYPE:	Journal
LANGUAGE:	English
REFERENCE COUNT:	27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
TI The Structural Determination of an Insect Sterol Carrier Protein-2 with a Ligand-bound C16 Fatty Acid at 1.35-Å Resolution
AB Yellow fever mosquito sterol carrier protein (SCP-2) is known to bind to cholesterol. We report here the three-dimensional structure of the complex of SCP-2 from Aedes aegypti with a C16 fatty acid to 1.35-Å resolution The protein fold is exceedingly similar to the human and rabbit proteins, which consist of a five-stranded β-sheet that exhibits strand order 3-2-1-4-5 with an accompanying layer of four α-helixes that cover the β-sheet. A large cavity exists at the interface of the layer α-helixes and the β-sheet, which serves as the fatty acid binding site. The carboxylate moiety of the fatty acid is coordinated by a short loop that connects the first α-helix to the first β-strand, whereas the acyl chain extends deep into the interior of the protein. Interestingly, the orientation of the fatty acid is opposite to the observed orientation for Triton X-100 in the SCP-2-like domain from the peroxisomal multifunctional enzyme. The present study suggests that the binding pocket in the SCP-2 family of proteins may exhibit conformational flexibility to allow coordination of a variety of

lipids.
ACCESSION NUMBER: 2003:771062 HCAPLUS
DOCUMENT NUMBER: 139:334538
TITLE: The Structural Determination of an Insect Sterol Carrier Protein-2 with a Ligand-bound C16 Fatty Acid at 1.35-Å Resolution
AUTHOR(S): Dyer, David H.; Lovell, Scott; Thoden, James B.; Holden, Hazel M.; Rayment, Ivan; Lan, Que
CORPORATE SOURCE: Departments of Biochemistry and Entomology, University of Wisconsin, Madison, WI, 53706, USA
SOURCE: Journal of Biological Chemistry (2003), 278(40), 39085-39091
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti
AB Trafficking of cholesterol in insects is a very important process due to the fact that insects depend on dietary cholesterol to fulfil their physiol. needs. We identified a putative mosquito sterol carrier protein-2 (SCP-2) cDNA from fourth instar subtracted cDNA library. The AeSCP-2 protein has high degree homol. in the sterol transfer domain to both rat and human SCP-2. Transcripts of AeSCP -2 in fourth instars were detected strongly in the midgut, and weakly in the head and hindgut. In the early pupae, AeSCP-2 transcription was observed in the thorax, head and body wall of abdomen, but not in the gut. The interaction of mosquito sterol carrier protein-2 (AeSCP-2) with cholesterol was examined The Kd of purified recombinant AeSCP-2 to cholesterol was 5.6 ± 0.6 + 10-9 M using radiolabeled cholesterol-binding assay. The results suggest that AeSCP-2 has high affinity to cholesterol and may function as a carrier protein in mosquitoes.
ACCESSION NUMBER: 2003:137131 HCAPLUS
DOCUMENT NUMBER: 138:298591
TITLE: Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti
AUTHOR(S): Krebs, K. C.; Lan, Q.
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI, 53706, USA
SOURCE: Insect Molecular Biology (2003), 12(1), 51-60
CODEN: IMBIE3; ISSN: 0962-1075
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 17 OF 23 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Identification of mosquito sterol carrier protein-2 inhibitors.
AB A mosquito sterol carrier protein-2, AeSCP-2, has been shown to aid in the uptake of cholesterol in mosquito cells. The discovery of chemical inhibitors of AeSCP-2 is reported here. AeSCP-2 inhibitors (SCPIs) belong to several chemotypes of hydrophobic compounds. Those inhibitors competed with cholesterol for AeSCP-2, binding with relatively high binding affinities. In cultured insect cells, SCPIs reduced

cholesterol uptake by as much as 30% at 1-5 μM concentrations. SCPIs were potent larvicides to the yellow fever mosquito, Aedes aegypti, and to the tobacco hornworm, Manduca sexto, with 50% lethal doses (LD(50)s) of 5-21 μM and 0.013-15 ng/mg diet, respectively. The results indicate that sterol carrier protein-2 has functional similarity in two different insect species. Copyright .COPYRGT. 2005 by the American Society for Biochemistry and Molecular Biology, Inc.

ACCESSION NUMBER: 2006024356 EMBASE
TITLE: Identification of mosquito sterol carrier protein-2 inhibitors.
AUTHOR: Kim M.-S.; Wessely V.; Lan Q.
CORPORATE SOURCE: Q. Lan, Department of Entomology, University of Wisconsin - Madison, Madison, WI, United States. qlan@entomology.wisc.edu
SOURCE: Journal of Lipid Research, (2005) Vol. 46, No. 4, pp. 650-657. .
Refs: 28
ISSN: 0022-2275 CODEN: JLPRAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 9 Feb 2006
Last Updated on STN: 9 Feb 2006

L1 ANSWER 18 OF 23 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AB Subcellular distribution of Aedes aegypti sterol carrier protein-2 (AeSCP-2) and AeSCP-x was studied using electron microscopy. In both cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected mostly in the cytosol, with some labeling mitochondria and nucleus, but not in membranous vesicles. The widespread distribution of AeSCP-2 in the midgut epithelium is consistent with its potential lipid transfer function in all phases of cholesterol absorption. In contrast, AeSCP-x was found mostly in the peroxisome. Differences in the subcellular distribution of AeSCP-2 and AeSCP-x suggest that these two members of the SCP-2 gene family are functionally distinct. Overexpression of AeSCP-2 in A. aegypti cells showed increased localization of AeSCP-2 to cytosol, mitochondria, and nucleus. This is the first report on the nuclear distribution of an SCP. Overexpression of AeSCP-2 resulted in increased cholesterol incorporation in cells, suggesting that AeSCP-2 enhances cholesterol uptake.

ACCESSION NUMBER: 2004330817 EMBASE
TITLE: Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AUTHOR: Lan Q.; Massey R.J.
CORPORATE SOURCE: Q. Lan, Department of Entomology, University of Wisconsin-Madison, Madison, WI 53706, United States. qlan@entomology.wisc.edu
SOURCE: Journal of Lipid Research, (2004) Vol. 45, No. 8, pp. 1468-1474. .
Refs: 27
ISSN: 0022-2275 CODEN: JLPRAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English

SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 2 Sep 2004
Last Updated on STN: 2 Sep 2004

L1 ANSWER 19 OF 23 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61142 protein DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the amino acid sequence of the yellow fever mosquito sterol carrier protein-2 (AeSCP-2).
ACCESSION NUMBER: ADT61142 protein DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: N-PSDB: ADT61140; ADT61141
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP-2).

L1 ANSWER 20 OF 23 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61144 DNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents a yellow fever mosquito sterol carrier protein-2 (AeSCP-2) 5' rapid amplification of cDNA end (RACE) primer.
ACCESSION NUMBER: ADT61144 DNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C

PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 5' RACE primer-2.

L1 ANSWER 21 OF 23 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61141 cDNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the yellow fever mosquito sterol carrier protein-2 (AeSCP-2) cDNA.
ACCESSION NUMBER: ADT61141 cDNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: P-PSDB: ADT61142
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP-2) cDNA.

L1 ANSWER 22 OF 23 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61143 DNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents a yellow fever mosquito sterol carrier protein-2 (AeSCP-2) 5' rapid amplification of cDNA end (RACE) primer.
ACCESSION NUMBER: ADT61143 DNA DGENE

TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 5' RACE primer-1.

L1 ANSWER 23 OF 23 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61140 cDNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the yellow fever mosquito sterol carrier protein-2 (AeSCP-2) coding region.
ACCESSION NUMBER: ADT61140 cDNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: P-PSDB: ADT61142
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP-2) coding region.

=> d his

(FILE 'HOME' ENTERED AT 09:59:31 ON 01 AUG 2006)

FILE 'MEDLINE, BIOTECHDS, BIOSIS, WPIDS, FSTA, JICST-EPLUS, HCAPLUS, EMBASE, DGENE' ENTERED AT 10:00:21 ON 01 AUG 2006
L1 23 S (AEDES AEGYPTI STEROL CARRIER PROTEIN-2) OR (AESCP-2)

=> s l1 and (activator)
L2 0 L1 AND (ACTIVATOR)

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=> s l1 and (inhibitor)
L3            2 L1 AND (INHIBITOR)

=> d l3 ti abs ibib tot

L3   ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2006 ACS on STN
TI   Identification of mosquito sterol carrier protein-2 inhibitors
AB   A mosquito sterol carrier protein-2, AeSCP-2, has been
     shown to aid in the uptake of cholesterol in mosquito cells.  The
     discovery of chemical inhibitors of AeSCP-2 by chemical
     library screening is reported here.  AeSCP-2
     inhibitors (SCPIs) belong to several chemotypes of hydrophobic compds.
     Those inhibitors competed with cholesterol for AeSCP-2
     , binding with relatively high binding affinities.  In cultured insect
     cells, SCPIs reduced cholesterol uptake by as much as 30% at 1-5 μM
     concns.  SCPIs were potent larvicides to the yellow fever mosquito, Aedes
     aegypti, and to the tobacco hornworm, Manduca sexta, with 50% LDs (LD50s)
     of 5-21 μM and 0.013-15 ng/mg diet, resp.  The results indicate that
     sterol carrier protein-2 has functional similarity in two different insect
     species.
ACCESSION NUMBER:         2005:452374  HCAPLUS
DOCUMENT NUMBER:          143:73236
TITLE:                    Identification of mosquito sterol carrier protein-2
                          inhibitors
AUTHOR(S):                Kim, Min-sik; Wessely, Vilena; Lan, Que
CORPORATE SOURCE:         Department of Entomology, University of
                          Wisconsin-Madison, Madison, WI, USA
SOURCE:                   Journal of Lipid Research (2005), 46(4), 650-657
                          CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER:                American Society for Biochemistry and Molecular
                          Biology, Inc.
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
REFERENCE COUNT:          28    THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3   ANSWER 2 OF 2  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Identification of mosquito sterol carrier protein-2 inhibitors.
AB   A mosquito sterol carrier protein-2, AeSCP-2, has been
     shown to aid in the uptake of cholesterol in mosquito cells.  The
     discovery of chemical inhibitors of AeSCP-2 is
     reported here.  AeSCP-2 inhibitors (SCPIs) belong to
     several chemotypes of hydrophobic compounds.  Those inhibitors competed
     with cholesterol for AeSCP-2, binding with relatively
     high binding affinities.  In cultured insect cells, SCPIs reduced
     cholesterol uptake by as much as 30% at 1-5 μM concentrations.  SCPIs
     were potent larvicides to the yellow fever mosquito, Aedes aegypti, and to
     the tobacco hornworm, Manduca sexto, with 50% lethal doses (LD(50)s) of
     5-21 μM and 0.013-15 ng/mg diet, respectively.  The results indicate
     that sterol carrier protein-2 has functional similarity in two different
     insect species.  Copyright .COPYRGT. 2005 by the American Society for
     Biochemistry and Molecular Biology, Inc.
ACCESSION NUMBER:    2006024356  EMBASE
TITLE:               Identification of mosquito sterol carrier protein-2
                     inhibitors.
AUTHOR:              Kim M.-S.; Wessely V.; Lan Q.
CORPORATE SOURCE:    Q. Lan, Department of Entomology, University of Wisconsin -
                     Madison, Madison, WI, United States.
                     qlan@entomology.wisc.edu
SOURCE:              Journal of Lipid Research, (2005) Vol. 46, No. 4, pp.
                     650-657. .
                     Refs: 28
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ISSN: 0022-2275 CODEN: JLPRAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 9 Feb 2006
Last Updated on STN: 9 Feb 2006

=> s l1 and (agonist)
L4 8 L1 AND (AGONIST)

=> d l4 ti abs ibib tot

L4 ANSWER 1 OF 8 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
TI Novel isolated and purified Aedes aegypti
sterol carrier protein-2
polypeptide or its fragment capable of intracellular cholesterol
transport, useful for identifying agonist or antagonist of
biological activity of polypeptide;
recombinant protein production via plasmid expression in host cell for
use in drug screenin
AN 2004-26494 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - An isolated and purified Aedes aegypti
sterol carrier protein-2 (
AeSCP-2) polypeptide (I) comprising an amino acid
sequence at least 85% identical to a fully defined sequence of 110 amino
acids (S1) as given in the specification, or its biologically-active
fragment capable of intracellular cholesterol transport, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1)
an isolated and purified nucleic acid (II) specifically hybridizing under
stringent conditions to either strand of a denatured, double-stranded
nucleic acid encoding (S1); (2) an expression vector (III) comprising
(II); (3) a transformed host cell or organism (IV) comprising (II); and
(4) preparing (I).
BIOTECHNOLOGY - Preparation: (I) is produced by culturing (IV) under
conditions conducive to expression of (I), and recovering the expressed
polypeptide from (IV) in isolated and purified form (claimed). Preferred
Polypeptide: In (I), the amino acid sequence is (S1). Preferred Nucleic
Acid: In (II), the denatured, double-stranded nucleic acid encoding (S1),
is the nucleotide sequence comprising a fully defined sequence of 333
base pairs as given in the specification.
USE - (I) is useful for identifying whether a compound is an
agonist or antagonist of AeSCP-2 biological
activity, which involves incubating (I) comprising (S1) or its
biologically-active fragment with a biological target in the presence of
a compound, and measuring the ability of the compound to enhance or block
the interaction between (I) or its fragment and the biological target,
thus identifying an agonist or antagonist effective in altering
AeSCP-2 biological activity, where the biological
target is cholesterol and the AeSCP-2 biological
activity is cholesterol transport. (I) is useful for identifying
compounds which bind to or interact with (I) or its fragments, which
involves contacting (I) or its fragment with a compound to be screened
under conditions to permit binding to or interaction between the compound
and (I) or its fragment to assess the binding to or interaction with the
compound, where the binding or interaction is associated with a
detectable signal in response to the binding or interaction of (I) or its
fragment with the compound, and determining whether the compound binds to
or interacts with (I) or its fragment by detecting the presence or
absence of the signal generated from the binding or interaction of the

compound with (I) or its fragment (claimed).
ADVANTAGE - (I) is capable of intracellular cholesterol transport in mosquitoes.
EXAMPLE - Preparation of recombinant Aedes aegypti sterol carrier protein-2 (rAeSCP-2) polypeptide was carried out as follows. To produce rAeSCP-2 the entire coding region of the AeSCP-2 gene was cloned into the pGEX-4T glutathione-S-transferase (GST) tag vector. Sequence analysis was performed to confirm that the fusion protein was in frame with GST. The GST/AeSCP-2 fusion protein was purified on a GST affinity column and the GST tag was removed by digesting with thrombin. The vector was introduced into bacterial cells. The bacterial culture was incubated overnight at 18degreesC after addition of isopropyl-beta-D-thiogalactopyranoside (IPTG) (0.2 mM). The predicted molecular weight of AeSCP-2 was 12.3 kDa and the purified rAeSCP-2 was 13 kDa estimated on the sodium dodecyl sulfate- polyacrylamide gel electrophoresis (SDS-PAGE). Thrombin was removed from eluted rAeSCP-2 by passing through a benzamidine column. The fusion protein (100 mg) from cultures (2.5 l) was obtained. Purified AeSCP-2 was concentrated to 8.1 mg/ml in phosphate buffered saline (PBS), pH 7.4, and stored in PBS at -80degreesC. (23 pages)

ACCESSION NUMBER: 2004-26494 BIOTECHDS
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide; recombinant protein production via plasmid expression in host cell for use in drug screenin
AUTHOR: LAN Q; KREBS K C
PATENT ASSIGNEE: WISCONSIN ALUMNI RES FOUND
PATENT INFO: US 2004211865 28 Oct 2004
APPLICATION INFO: US 2004-823203 13 Apr 2004
PRIORITY INFO: US 2004-823203 13 Apr 2004; US 2003-465648 25 Apr 2003
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-765537 [75]

L4 ANSWER 2 OF 8 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN 2004-765537 [75] WPIDS
AB US2004211865 A UPAB: 20041122
NOVELTY - An isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide (I) comprising an amino acid sequence at least 85% identical to a fully defined sequence of 110 amino acids (S1) as given in the specification, or its biologically-active fragment capable of intracellular cholesterol transport, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(1) an isolated and purified nucleic acid (II) specifically hybridizing under stringent conditions to either strand of a denatured, double-stranded nucleic acid encoding (S1);
(2) an expression vector (III) comprising (II);
(3) a transformed host cell or organism (IV) comprising (II); and
(4) preparing (I).
USE - (I) is useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity, which involves incubating (I) comprising (S1) or its biologically-active fragment with a biological target in the presence of a

compound, and measuring the ability of the compound to enhance or block the interaction between (I) or its fragment and the biological target, thus identifying an agonist or antagonist effective in altering AeSCP-2 biological activity, where the biological target is cholesterol and the AeSCP-2 biological activity is cholesterol transport. (I) is useful for identifying compounds which bind to or interact with (I) or its fragments, which involves contacting (I) or its fragment with a compound to be screened under conditions to permit binding to or interaction between the compound and (I) or its fragment to assess the binding to or interaction with the compound, where the binding or interaction is associated with a detectable signal in response to the binding or interaction of (I) or its fragment with the compound, and determining whether the compound binds to or interacts with (I) or its fragment by detecting the presence or absence of the signal generated from the binding or interaction of the compound with (I) or its fragment (claimed).

ADVANTAGE - (I) is capable of intracellular cholesterol transport in mosquitoes.

Dwg.0/7

ACCESSION NUMBER: 2004-765537 [75] WPIDS
DOC. NO. NON-CPI: N2004-603943
DOC. NO. CPI: C2004-268343
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): KREBS, K C; LAN, Q
PATENT ASSIGNEE(S): (WISC) WISCONSIN ALUMNI RES FOUND
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2004211865	A1	20041028	(200475)*		23

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004211865	A1 Provisional	US 2003-465648P	20030425
		US 2004-823203	20040413

PRIORITY APPLN. INFO: US 2003-465648P 20030425; US 2004-823203 20040413

L4 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Protein and cDNA sequences of sterol carrier protein-2 gene from yellow fever mosquito, Aedes aegypti
AB The invention provides the protein and cDNA sequences of sterol carrier protein-2 (AeSCP-2) isolated from Aedes aegypti. Also provided are methods for utilizing AeSCP-2 polypeptides to screen for compds. exhibiting antagonist or agonist activity toward AeSCP-2 biol. activity, in particular, cholesterol transport. Tissue distribution of AeSCP-2 changed through development. In larvae, AeSCP-2 transcription was at high and low levels in the gut and head, resp. Early pupae transcribed AeSCP-2 gene in the body wall of both thorax and abdomen in contrast to the very low level of mRNA in the body wall of larvae. AeSCP-2

is the first putative intracellular cholesterol transporting protein reported in insects. The transcriptional profiles and tissue distribution of AeSCP-2 mRNA suggest that AeSCP-2 may be involved in cholesterol absorption/intracellular transfer and ecdysteroid biosynthesis. The results from direct binding of [3H] cholesterol showed that AeSCP-2 has high affinity to cholesterol. Thus, it provided strong evidence that AeSCP-2 functions as a cholesterol transporter in mosquitoes.

ACCESSION NUMBER: 2004:905240 HCAPLUS
DOCUMENT NUMBER: 141:375527
TITLE: Protein and cDNA sequences of sterol carrier protein-2 gene from yellow fever mosquito, Aedes aegypti
INVENTOR(S): Lan, Que; Krebs, Kendall C.
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004211865	A1	20041028	US 2004-823203		20040413
PRIORITY APPLN. INFO.:			US 2003-465648P	P	20030425

L4 ANSWER 4 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61142 protein DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the amino acid sequence of the yellow fever mosquito sterol carrier protein-2 (AeSCP-2).
ACCESSION NUMBER: ADT61142 protein DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: N-PSDB: ADT61140; ADT61141
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP-2).

L4 ANSWER 5 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI Novel isolated and purified Aedes aegypti
sterol carrier protein-2
polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61144 DNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-
2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents a yellow fever mosquito sterol carrier protein-2 (AeSCP-2) 5' rapid amplification of cDNA end (RACE) primer.
ACCESSION NUMBER: ADT61144 DNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 5' RACE primer-2.

L4 ANSWER 6 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61141 cDNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-
2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the yellow fever mosquito sterol carrier protein-2 (AeSCP-2) cDNA.
ACCESSION NUMBER: ADT61141 cDNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413

PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: P-PSDB: ADT61142
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP -2) cDNA.

L4 ANSWER 7 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61143 DNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents a yellow fever mosquito sterol carrier protein-2 (AeSCP-2) 5' rapid amplification of cDNA end (RACE) primer.
ACCESSION NUMBER: ADT61143 DNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 5' RACE primer-1.

L4 ANSWER 8 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61140 cDNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the yellow fever mosquito sterol carrier protein-2 (AeSCP-2) coding region.
ACCESSION NUMBER: ADT61140 cDNA DGENE
TITLE: Novel isolated and purified Aedes aegypti

sterol carrier protein-2
polypeptide or its fragment capable of intracellular
cholesterol transport, useful for identifying
agonist or antagonist of biological activity of
polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: P-PSDB: ADT61142
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP
-2) coding region.

=> s l1 and antagonist
L5 8 L1 AND ANTAGONIST

=> d l5 ti abs ibib tot

L5 ANSWER 1 OF 8 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
TI Novel isolated and purified Aedes aegypti
sterol carrier protein-2
polypeptide or its fragment capable of intracellular cholesterol
transport, useful for identifying agonist or antagonist of
biological activity of polypeptide;
recombinant protein production via plasmid expression in host cell for
use in drug screenin
AN 2004-26494 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - An isolated and purified Aedes aegypti
sterol carrier protein-2 (
AeSCP-2) polypeptide (I) comprising an amino acid
sequence at least 85% identical to a fully defined sequence of 110 amino
acids (S1) as given in the specification, or its biologically-active
fragment capable of intracellular cholesterol transport, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1)
an isolated and purified nucleic acid (II) specifically hybridizing under
stringent conditions to either strand of a denatured, double-stranded
nucleic acid encoding (S1); (2) an expression vector (III) comprising
(II); (3) a transformed host cell or organism (IV) comprising (II); and
(4) preparing (I).
BIOTECHNOLOGY - Preparation: (I) is produced by culturing (IV) under
conditions conducive to expression of (I), and recovering the expressed
polypeptide from (IV) in isolated and purified form (claimed). Preferred
Polypeptide: In (I), the amino acid sequence is (S1). Preferred Nucleic
Acid: In (II), the denatured, double-stranded nucleic acid encoding (S1),
is the nucleotide sequence comprising a fully defined sequence of 333
base pairs as given in the specification.
USE - (I) is useful for identifying whether a compound is an agonist
or antagonist of AeSCP-2 biological
activity, which involves incubating (I) comprising (S1) or its
biologically-active fragment with a biological target in the presence of
a compound, and measuring the ability of the compound to enhance or block
the interaction between (I) or its fragment and the biological target,
thus identifying an agonist or antagonist effective in altering
AeSCP-2 biological activity, where the biological
target is cholesterol and the AeSCP-2 biological
activity is cholesterol transport. (I) is useful for identifying
compounds which bind to or interact with (I) or its fragments, which

involves contacting (I) or its fragment with a compound to be screened under conditions to permit binding to or interaction between the compound and (I) or its fragment to assess the binding to or interaction with the compound, where the binding or interaction is associated with a detectable signal in response to the binding or interaction of (I) or its fragment with the compound, and determining whether the compound binds to or interacts with (I) or its fragment by detecting the presence or absence of the signal generated from the binding or interaction of the compound with (I) or its fragment (claimed).

ADVANTAGE - (I) is capable of intracellular cholesterol transport in mosquitoes.

EXAMPLE - Preparation of recombinant Aedes aegypti sterol carrier protein-2 (rAeSCP-2) polypeptide was carried out as follows. To produce rAeSCP-2 the entire coding region of the AeSCP-2 gene was cloned into the pGEX-4T glutathione-S-transferase (GST) tag vector. Sequence analysis was performed to confirm that the fusion protein was in frame with GST. The GST/AeSCP-2 fusion protein was purified on a GST affinity column and the GST tag was removed by digesting with thrombin. The vector was introduced into bacterial cells. The bacterial culture was incubated overnight at 18degreesC after addition of isopropyl-beta-D-thiogalactopyranoside (IPTG) (0.2 mM). The predicted molecular weight of AeSCP-2 was 12.3 kDa and the purified rAeSCP-2 was 13 kDa estimated on the sodium dodecyl sulfate- polyacrylamide gel electrophoresis (SDS-PAGE). Thrombin was removed from eluted rAeSCP-2 by passing through a benzamidine column. The fusion protein (100 mg) from cultures (2.5 l) was obtained. Purified AeSCP-2 was concentrated to 8.1 mg/ml in phosphate buffered saline (PBS), pH 7.4, and stored in PBS at -80degreesC. (23 pages)

ACCESSION NUMBER: 2004-26494 BIOTECHDS
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide; recombinant protein production via plasmid expression in host cell for use in drug screenin
AUTHOR: LAN Q; KREBS K C
PATENT ASSIGNEE: WISCONSIN ALUMNI RES FOUND
PATENT INFO: US 2004211865 28 Oct 2004
APPLICATION INFO: US 2004-823203 13 Apr 2004
PRIORITY INFO: US 2004-823203 13 Apr 2004; US 2003-465648 25 Apr 2003
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-765537 [75]

L5 ANSWER 2 OF 8 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN 2004-765537 [75] WPIDS
AB US2004211865 A UPAB: 20041122
NOVELTY - An isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide (I) comprising an amino acid sequence at least 85% identical to a fully defined sequence of 110 amino acids (S1) as given in the specification, or its biologically-active fragment capable of intracellular cholesterol transport, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) an isolated and purified nucleic acid (II) specifically hybridizing under stringent conditions to either strand of a denatured,

double-stranded nucleic acid encoding (S1);
(2) an expression vector (III) comprising (II);
(3) a transformed host cell or organism (IV) comprising (II); and
(4) preparing (I).
USE - (I) is useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity, which involves incubating (I) comprising (S1) or its biologically-active fragment with a biological target in the presence of a compound, and measuring the ability of the compound to enhance or block the interaction between (I) or its fragment and the biological target, thus identifying an agonist or antagonist effective in altering AeSCP-2 biological activity, where the biological target is cholesterol and the AeSCP-2 biological activity is cholesterol transport. (I) is useful for identifying compounds which bind to or interact with (I) or its fragments, which involves contacting (I) or its fragment with a compound to be screened under conditions to permit binding to or interaction between the compound and (I) or its fragment to assess the binding to or interaction with the compound, where the binding or interaction is associated with a detectable signal in response to the binding or interaction of (I) or its fragment with the compound, and determining whether the compound binds to or interacts with (I) or its fragment by detecting the presence or absence of the signal generated from the binding or interaction of the compound with (I) or its fragment (claimed).
ADVANTAGE - (I) is capable of intracellular cholesterol transport in mosquitoes.
Dwg.0/7

ACCESSION NUMBER: 2004-765537 [75] WPIDS
DOC. NO. NON-CPI: N2004-603943
DOC. NO. CPI: C2004-268343
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): KREBS, K C; LAN, Q
PATENT ASSIGNEE(S): (WISC) WISCONSIN ALUMNI RES FOUND
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2004211865	A1	20041028	(200475)*		23

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004211865	A1 Provisional	US 2003-465648P	20030425
		US 2004-823203	20040413

PRIORITY APPLN. INFO: US 2003-465648P 20030425; US 2004-823203 20040413

L5 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Protein and cDNA sequences of sterol carrier protein-2 gene from yellow fever mosquito, Aedes aegypti
AB The invention provides the protein and cDNA sequences of sterol carrier protein-2 (AeSCP-2) isolated from Aedes aegypti. Also provided are methods for utilizing AeSCP-2

polypeptides to screen for compds. exhibiting antagonist or agonist activity toward AeSCP-2 biol. activity, in particular, cholesterol transport. Tissue distribution of AeSCP -2 changed through development. In larvae, AeSCP-2 transcription was at high and low levels in the gut and head, resp. Early pupae transcribed AeSCP-2 gene in the body wall of both thorax and abdomen in contrast to the very low level of mRNA in the body wall of larvae. AeSCP-2 is the first putative intracellular cholesterol transporting protein reported in insects. The transcriptional profiles and tissue distribution of AeSCP-2 mRNA suggest that AeSCP-2 may be involved in cholesterol absorption/intracellular transfer and ecdysteroid biosynthesis. The results from direct binding of [3H] cholesterol showed that AeSCP-2 has high affinity to cholesterol. Thus, it provided strong evidence that AeSCP-2 functions as a cholesterol transporter in mosquitoes.

ACCESSION NUMBER: 2004:905240 HCAPLUS
DOCUMENT NUMBER: 141:375527
TITLE: Protein and cDNA sequences of sterol carrier protein-2 gene from yellow fever mosquito, Aedes aegypti
INVENTOR(S): Lan, Que; Krebs, Kendall C.
PATENT ASSIGNEE(S): Wisconsin Alumni Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004211865	A1	20041028	US 2004-823203		20040413
PRIORITY APPLN. INFO.:			US 2003-465648P	P	20030425

L5 ANSWER 4 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61142 protein DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the amino acid sequence of the yellow fever mosquito sterol carrier protein-2 (AeSCP-2).

ACCESSION NUMBER: ADT61142 protein DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent

LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: N-PSDB: ADT61140; ADT61141
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP -2).

L5 ANSWER 5 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61144 DNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents a yellow fever mosquito sterol carrier protein-2 (AeSCP-2) 5' rapid amplification of cDNA end (RACE) primer.
ACCESSION NUMBER: ADT61144 DNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 5' RACE primer-2.

L5 ANSWER 6 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61141 cDNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents the yellow fever mosquito sterol carrier protein-2 (AeSCP-2) cDNA.
ACCESSION NUMBER: ADT61141 cDNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or

antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: P-PSDB: ADT61142
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP -2) cDNA.

L5 ANSWER 7 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61143 DNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The present sequence represents a yellow fever mosquito sterol carrier protein-2 (AeSCP-2) 5' rapid amplification of cDNA end (RACE) primer.
ACCESSION NUMBER: ADT61143 DNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 5' RACE primer-1.

L5 ANSWER 8 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
TI Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
AN ADT61140 cDNA DGENE
AB The invention relates to an isolated and purified Aedes aegypti sterol carrier protein-2 (AeSCP-2) polypeptide. The polypeptide useful for identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity. The polypeptide is useful for identifying compounds which bind to or interact with the polypeptide or its fragments. The polypeptide is capable of intracellular cholesterol transport in mosquitoes. The

present sequence represents the yellow fever mosquito sterol carrier protein-2 (AeSCP-2) coding region.

ACCESSION NUMBER: ADT61140 cDNA DGENE
TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide.
INVENTOR: Lan Q; Krebs K C
PATENT ASSIGNEE: (WISC)WISCONSIN ALUMNI RES FOUND.
PATENT INFO: US 2004211865 A1 20041028 23
APPLICATION INFO: US 2004-823203 20040413
PRIORITY INFO: US 2003-465648P 20030425
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2004-765537 [75]
CROSS REFERENCES: P-PSDB: ADT61142
DESCRIPTION: Yellow fever mosquito sterol carrier protein-2 (AeSCP -2) coding region.

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=> file scisearch
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   162.02     162.44

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -6.75      -6.75

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E2           13     LAN Z Y/AU
E3            0 --> LAN,QUE/AU
E4            5     LANA A/AU
E5           11     LANA A F/AU
E6           12     LANA A M A/AU
E7            7     LANA A M Q/AU
E8            8     LANA A O/AU
E9            2     LANA A T/AU
E10          19     LANA C/AU
E11           3     LANA C C/AU
E12           1     LANA D/AU

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E2           12     AESCP/BI
E3            0 --> AESCP-2/BI
E4            1     AESCR/BI
E5            2     AESCUFLAVOSIDE/BI
E6            3     AESCULA/BI
E7            2     AESCULAAP/BI
E8            2     AESCULAB/BI
E9            1     AESCULACANTHA/BI
E10           3     AESCULAFORCE/BI
E11           2     AESCULAMINE/BI
E12           2     AESCULANA/BI

=> s e2
L6           12 AESCP/BI

=> s AeSCP-2+NT/CT
'AESCP-2' NOT IN RELATIONSHIP FILE
RELATIONSHIP CODE 'NT' IGNORED
'AESCP-2' NOT IN RELATIONSHIP FILE
RELATIONSHIP CODE 'NT' IGNORED
L7            1 AESCP-2+NT/CT

=> d l7 ti abs ibib tot

L7   ANSWER 1 OF 1  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
TI   Subcellular localization of the mosquito sterol carrier protein-2 and
     sterol carrier protein-x.
AB   Subcellular distribution of Aedes aegypti sterol carrier protein-2
     (AeSCP-2) and AeSCP-x was studied using electron microscopy.  In both
     cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected
     mostly in the cytosol, with some labeling mitochondria and nucleus, but
     not in membranous vesicles.  The widespread distribution of AeSCP-2 in the
     midgut epithelium is consistent with its potential lipid transfer function
     in all phases of cholesterol absorption.  In contrast, AeSCP-x was found
     mostly in the peroxisome.  Differences in the subcellular distribution of
     AeSCP-2 and AeSCP-x suggest that these two members of the SCP-2 gene
     family are functionally distinct.  Overexpression of AeSCP-2 in A. aegypti
     cells showed increased localization of AeSCP-2 to cytosol, mitochondria,
     and nucleus.  This is the first report on the nuclear distribution of an
     SCP.  Overexpression of AeSCP-2 resulted in increased cholesterol
     incorporation in cells, suggesting that AeSCP-2 enhances cholesterol
     uptake.-Lan, Q., and R.  J.  Massey.  Subcellular localization of the
     mosquito sterol carrier protein-2 and sterol carrier protein-x.
ACCESSION NUMBER:    2004:404206  BIOSIS
DOCUMENT NUMBER:     PREV200400408392
TITLE:               Subcellular localization of the mosquito sterol carrier
                     protein-2 and sterol carrier protein-x.
AUTHOR(S):           Lan, Que [Reprint Author]; Massey, Randall J.
CORPORATE SOURCE:    Dept Entomol, Univ Wisconsin, Madison, WI, 53706, USA
                     qlan@entomology.wisc.edu
SOURCE:              Journal of Lipid Research, (August 2004) Vol. 45, No. 8,
                     pp. 1468-1474. print.
                     CODEN: JLPRAW. ISSN: 0022-2275.
DOCUMENT TYPE:       Article
LANGUAGE:            English
ENTRY DATE:          Entered STN: 20 Oct 2004
                     Last Updated on STN: 20 Oct 2004
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=> d his

     (FILE 'HOME' ENTERED AT 09:59:31 ON 01 AUG 2006)

     FILE 'MEDLINE, BIOTECHDS, BIOSIS, WPIDS, FSTA, JICST-EPLUS, HCAPLUS,
     EMBASE, DGENE' ENTERED AT 10:00:21 ON 01 AUG 2006
L1           23 S (AEDES AEGYPTI STEROL CARRIER PROTEIN-2) OR (AESCP-2)
L2            0 S L1 AND (ACTIVATOR)
L3            2 S L1 AND (INHIBITOR)
L4            8 S L1 AND (AGONIST)
L5            8 S L1 AND ANTAGONIST

     FILE 'SCISEARCH' ENTERED AT 10:03:34 ON 01 AUG 2006
               E LAN,QUE/AU

     FILE 'MEDLINE, BIOSIS' ENTERED AT 10:04:21 ON 01 AUG 2006
               E AESCP-2
L6           12 S E2
L7            1 S AESCP-2+NT/CT

=> d l6 ti abs ibib tot

L6   ANSWER 1 OF 12     MEDLINE on STN
TI   Functional analysis of AeSCP-2 using gene expression knockdown
     in the yellow fever mosquito, Aedes aegypti.
AB   The effect of gene expression knockdown was used to study the function of
     the sterol carrier protein-2 (AeSCP-2) in the yellow fever
     mosquito, Aedes aegypti.  Injection of small double stranded AeSCP
     -2 RNAs into mosquito larvae resulted in the knockdown of gene products.
     The lack of AeSCP-2 in larvae coincided with a reduction in
     accumulated cholesterol in pupae, supporting the hypothesis that
     AeSCP-2 may be involved in cholesterol uptake in mosquito larvae.
     Knockdown of AeSCP-2 caused a high mortality rate in developing
     adult and reduced egg viability.  Results from this study indicate that
     AeSCP-2 is important for adult development and for the viability
     of the eggs.
ACCESSION NUMBER:    2005283088     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 15926899
TITLE:               Functional analysis of AeSCP-2 using gene
                     expression knockdown in the yellow fever mosquito, Aedes
                     aegypti.
AUTHOR:              Blitzer E J; Vyazunova I; Lan Q
CORPORATE SOURCE:    Department of Entomology, University of Wisconsin-Madison,
                     Madison, WI 53706, USA.
SOURCE:              Insect molecular biology, (2005 Jun) Vol. 14, No. 3, pp.
                     301-7.
                     Journal code: 9303579. ISSN: 0962-1075.
PUB. COUNTRY:        England: United Kingdom
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200507
ENTRY DATE:          Entered STN: 2 Jun 2005
                     Last Updated on STN: 9 Jul 2005
                     Entered Medline: 8 Jul 2005

L6   ANSWER 2 OF 12     MEDLINE on STN
TI   Identification of mosquito sterol carrier protein-2 inhibitors.
AB   A mosquito sterol carrier protein-2, AeSCP-2, has been shown to
     aid in the uptake of cholesterol in mosquito cells.  The discovery of
     chemical inhibitors of AeSCP-2 is reported here.  AeSCP
     -2 inhibitors (SCPIs) belong to several chemotypes of hydrophobic
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compounds. Those inhibitors competed with cholesterol for AeSCP -2, binding with relatively high binding affinities. In cultured insect cells, SCPIs reduced cholesterol uptake by as much as 30% at 1-5 microM concentrations. SCPIs were potent larvicides to the yellow fever mosquito, Aedes aegypti, and to the tobacco hornworm, Manduca sexta, with 50% lethal doses (LD50s) of 5-21 microM and 0.013-15 ng/mg diet, respectively. The results indicate that sterol carrier protein-2 has functional similarity in two different insect species.

ACCESSION NUMBER: 2005140282 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15627652
TITLE: Identification of mosquito sterol carrier protein-2 inhibitors.
AUTHOR: Kim Min-sik; Wessely Vilena; Lan Que
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, Wisconsin, USA.
SOURCE: Journal of lipid research, (2005 Apr) Vol. 46, No. 4, pp. 650-7. Electronic Publication: 2005-01-01.
Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507
ENTRY DATE: Entered STN: 18 Mar 2005
Last Updated on STN: 16 Jul 2005
Entered Medline: 15 Jul 2005

L6 ANSWER 3 OF 12 MEDLINE on STN
TI Expression of a sterol carrier protein-x gene in the yellow fever mosquito, Aedes aegypti.
AB The sterol carrier protein-x (SCP-x), a peroxisomal thiolase/nonspecific lipid binding protein, was characterized in the yellow fever mosquito, Aedes aegypti. The Aedes aegypti SCP-x (AeSCP-x) has 83% and 75% similarities to Drosophila and mammalian SCP-x, respectively. However, the AeSCP-x gene did not produce multiple transcripts, which is characteristic of the vertebrate SCP-x gene. Levels of AeSCP-x transcription were higher in larvae and pupae. Gut tissue showed the highest level of AeSCP-x mRNA in larvae. In adults, low levels of AeSCP-x transcription were detected in both sexes. Polyclonal antibodies against the sterol carrier protein-2 (SCP-2) domain of AeSCP-x detected two proteins of 62 kDa and 13 kDa. The results indicate that AeSCP-x is proteolytically cleaved after translation to produce a smaller protein that contains only the SCP-2 domain, which is similar to post-translational modification of the vertebrate's SCP-x to produce multiple products.

ACCESSION NUMBER: 2004465201 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15373808
TITLE: Expression of a sterol carrier protein-x gene in the yellow fever mosquito, Aedes aegypti.
AUTHOR: Lan Q; Wessely V
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, WI 53706, USA.. qlan@entomology.wisc.edu
SOURCE: Insect molecular biology, (2004 Oct) Vol. 13, No. 5, pp. 519-29.
Journal code: 9303579. ISSN: 0962-1075.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200501
ENTRY DATE: Entered STN: 21 Sep 2004
Last Updated on STN: 2 Feb 2005
Entered Medline: 31 Jan 2005

L6 ANSWER 4 OF 12 MEDLINE on STN
TI Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AB Subcellular distribution of Aedes aegypti sterol carrier protein-2 (AeSCP-2) and AeSCP-x was studied using electron microscopy. In both cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected mostly in the cytosol, with some labeling mitochondria and nucleus, but not in membranous vesicles. The widespread distribution of AeSCP-2 in the midgut epithelium is consistent with its potential lipid transfer function in all phases of cholesterol absorption. In contrast, AeSCP-x was found mostly in the peroxisome. Differences in the subcellular distribution of AeSCP -2 and AeSCP-x suggest that these two members of the SCP-2 gene family are functionally distinct. Overexpression of AeSCP-2 in A. aegypti cells showed increased localization of AeSCP-2 to cytosol, mitochondria, and nucleus. This is the first report on the nuclear distribution of an SCP. Overexpression of AeSCP-2 resulted in increased cholesterol incorporation in cells, suggesting that AeSCP-2 enhances cholesterol uptake.

ACCESSION NUMBER: 2004351261 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15145982
TITLE: Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AUTHOR: Lan Que; Massey Randall J
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI 53706, USA.. qlan@entomology.wisc.edu
SOURCE: Journal of lipid research, (2004 Aug) Vol. 45, No. 8, pp. 1468-74. Electronic Publication: 2004-05-16. Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200502
ENTRY DATE: Entered STN: 16 Jul 2004
Last Updated on STN: 9 Feb 2005
Entered Medline: 8 Feb 2005

L6 ANSWER 5 OF 12 MEDLINE on STN
TI Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.
AB Trafficking of cholesterol in insects is a very important process due to the fact that insects depend on dietary cholesterol to fulfil their physiological needs. We identified a putative mosquito sterol carrier protein-2 (SCP-2) cDNA from fourth instar subtracted cDNA library. The AeSCP-2 protein has high degree homology in the sterol transfer domain to both rat and human SCP-2. Transcripts of AeSCP-2 in fourth instars were detected strongly in the midgut, and weakly in the head and hindgut. In the early pupae, AeSCP-2 transcription was observed in the thorax, head and body wall of abdomen, but not in the gut. The interaction of mosquito sterol carrier protein-2 (AeSCP-2) with cholesterol was examined. The Kd of purified recombinant AeSCP-2 to cholesterol was 5.6 +/- 0.6 x 10-9 m using radiolabelled cholesterol-binding assay. The results suggest that AeSCP-2 has high affinity to cholesterol and may function as a carrier protein in mosquitoes.
ACCESSION NUMBER: 2003036500 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12542635
TITLE: Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.

AUTHOR: Krebs K C; Lan Q
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI 53076, USA.
SOURCE: Insect molecular biology, (2003 Feb) Vol. 12, No. 1, pp. 51-60.
Journal code: 9303579. ISSN: 0962-1075.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200304
ENTRY DATE: Entered STN: 25 Jan 2003
Last Updated on STN: 4 Apr 2003
Entered Medline: 3 Apr 2003

L6 ANSWER 6 OF 12 MEDLINE on STN
TI Level diagnosis of cervical myelopathy using evoked spinal cord potentials.
AB The ESCPs (evoked spinal cord potentials) resulting from both median nerve and spinal cord stimulation were recorded from the interlaminar yellow ligaments posteriorly or intervertebral discs anteriorly on patients with cervical myelopathy in order to determine the most significant lesion in the spinal cord electrophysiologically. The normal median-nerve-evoked spinal cord potential (MN-ESCP) consisted of P1N1 and N2(P2) deflections, while normal spinal cord-ascending evoked spinal cord potential (SC-AESCP) consisted of N1 and N2 deflections. The abnormal ESCPs obtained from 65 patients were classified into three grades. The spinal level recording the highest grade of ESCP, which was mostly positive wave, generally corresponded to the level that was clearly diagnosed as the main lesion by neurologic and radiologic examinations, such as a case of single level disc hernia. With these techniques, the level diagnostic rates of primary lesions were 94.7% in posterior recordings and 74.1% in anterior recordings.
ACCESSION NUMBER: 89084679 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3206281
TITLE: Level diagnosis of cervical myelopathy using evoked spinal cord potentials.
AUTHOR: Satomi K; Okuma T; Kenmotsu K; Nakamura Y; Hirabayashi K
CORPORATE SOURCE: Department of Orthopaedic Surgery, School of Medicine, Keio University, Tokyo, Japan.
SOURCE: Spine, (1988 Nov) Vol. 13, No. 11, pp. 1217-24.
Journal code: 7610646. ISSN: 0362-2436.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CASE REPORTS)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198902
ENTRY DATE: Entered STN: 8 Mar 1990
Last Updated on STN: 8 Mar 1990
Entered Medline: 7 Feb 1989

L6 ANSWER 7 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Identification of mosquito sterol carrier protein-2 inhibitors.
AB A mosquito sterol carrier protein-2, AeSCP-2, has been shown to aid in the uptake of cholesterol in mosquito cells. The discovery of chemical inhibitors of AeSCP-2 is reported here. AeSCP -2 inhibitors (SCPIs) belong to several chemotypes of hydrophobic compounds. Those inhibitors competed with cholesterol for AeSCP -2, binding with relatively high binding affinities. In cultured insect cells, SCPIs reduced cholesterol uptake by as much as 30% at 1-5 mu M concentrations. SCPIs were potent larvicides to the yellow fever mosquito, Aedes aegypti, and to the tobacco hornworm, Manduca sexta, with

50% lethal doses (LD(50)s) of 5-21 mu M and 0.013-15 ng/mg diet, respectively. The results indicate that sterol carrier protein-2 has functional similarity in two different insect species.

ACCESSION NUMBER: 2005:507198 BIOSIS
DOCUMENT NUMBER: PREV200510305335
TITLE: Identification of mosquito sterol carrier protein-2 inhibitors.
AUTHOR(S): Kim, Min-sik; Wessely, Vilena; Lan, Que [Reprint Author]
CORPORATE SOURCE: Univ Wisconsin, Dept Entomol, Madison, WI 53706 USA qlan@entomology.wisc.edu
SOURCE: Journal of Lipid Research, (APR 2005) Vol. 46, No. 4, pp. 650-657.
CODEN: JLPRAW. ISSN: 0022-2275.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Nov 2005
Last Updated on STN: 23 Nov 2005

L6 ANSWER 8 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito, Aedes aegypti.
AB The effect of gene expression knockdown was used to study the function of the sterol carrier protein-2 (AeSCP-2) in the yellow fever mosquito, Aedes aegypti. Injection of small double stranded AeSCP -2 RNAs into mosquito larvae resulted in the knockdown of gene products. The lack of AeSCP-2 in larvae coincided with a reduction in accumulated cholesterol in pupae, supporting the hypothesis that AeSCP-2 may be involved in cholesterol uptake in mosquito larvae. Knockdown of AeSCP-2 caused a high mortality rate in developing adult and reduced egg viability. Results from this study indicate that AeSCP-2 is important for adult development and for the viability of the eggs.

ACCESSION NUMBER: 2005:333848 BIOSIS
DOCUMENT NUMBER: PREV200510123900
TITLE: Functional analysis of AeSCP-2 using gene expression knockdown in the yellow fever mosquito, Aedes aegypti.
AUTHOR(S): Blitzer, E. J.; Vyazunova, I.; Lan, Q. [Reprint Author]
CORPORATE SOURCE: Univ Wisconsin, Dept Entomol, Madison, WI 53706 USA qlan@entomology.wisc.edu
SOURCE: Insect Molecular Biology, (JUN 2005) Vol. 14, No. 3, pp. 301-307.
ISSN: 0962-1075.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 31 Aug 2005
Last Updated on STN: 31 Aug 2005

L6 ANSWER 9 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Expression of a sterol carrier protein-x gene in the Yellow fever mosquito, Aedes aegypti.
AB The sterol carrier protein-x (SCP-x), a peroxisomal thiolase/nonspecific lipid binding protein, was characterized in the yellow fever mosquito, Aedes aegypti. The Aedes aegypti SCP-x (AeSCP-x) has 83% and 75% similarities to Drosophila and mammalian SCP-x, respectively. However, the AeSCP-x gene did not produce multiple transcripts, which is characteristic of the vertebrate SCP-x gene. Levels of AeSCP-x transcription were higher in larvae and pupae. Gut tissue showed the highest level of AeSCP-x mRNA in larvae. In adults, low levels of AeSCP-x transcription were detected in both sexes. Polyclonal antibodies against the sterol carrier protein-2 (SCP-2) domain of AeSCP-x detected two proteins of 62 kDa and 13 kDa. The results indicate that AeSCP-x is proteolytically cleaved after

translation to produce a smaller protein that contains only the SCP-2 domain, which is similar to post-translational modification of the vertebrate's SCP-x to produce multiple products.

ACCESSION NUMBER: 2004:467849 BIOSIS
DOCUMENT NUMBER: PREV200400466474
TITLE: Expression of a sterol carrier protein-x gene in the Yellow fever mosquito, Aedes aegypti.
AUTHOR(S): Lan, Q. [Reprint Author]; Wessely, V.
CORPORATE SOURCE: Dept Entomol, Univ Wisconsin, Madison, WI, 53706, USA qlan@entomology.wisc.edu
SOURCE: Insect Molecular Biology, (October 2004) Vol. 13, No. 5, pp. 519-529. print.
ISSN: 0962-1075 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 2004
Last Updated on STN: 9 Dec 2004

L6 ANSWER 10 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AB Subcellular distribution of Aedes aegypti sterol carrier protein-2 (AeSCP-2) and AeSCP-x was studied using electron microscopy. In both cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected mostly in the cytosol, with some labeling mitochondria and nucleus, but not in membranous vesicles. The widespread distribution of AeSCP-2 in the midgut epithelium is consistent with its potential lipid transfer function in all phases of cholesterol absorption. In contrast, AeSCP-x was found mostly in the peroxisome. Differences in the subcellular distribution of AeSCP -2 and AeSCP-x suggest that these two members of the SCP-2 gene family are functionally distinct. Overexpression of AeSCP-2 in A. aegypti cells showed increased localization of AeSCP-2 to cytosol, mitochondria, and nucleus. This is the first report on the nuclear distribution of an SCP. Overexpression of AeSCP-2 resulted in increased cholesterol incorporation in cells, suggesting that AeSCP-2 enhances cholesterol uptake.-Lan, Q., and R. J. Massey. Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
ACCESSION NUMBER: 2004:404206 BIOSIS
DOCUMENT NUMBER: PREV200400408392
TITLE: Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AUTHOR(S): Lan, Que [Reprint Author]; Massey, Randall J.
CORPORATE SOURCE: Dept Entomol, Univ Wisconsin, Madison, WI, 53706, USA qlan@entomology.wisc.edu
SOURCE: Journal of Lipid Research, (August 2004) Vol. 45, No. 8, pp. 1468-1474. print.
CODEN: JLPRAW. ISSN: 0022-2275.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Oct 2004
Last Updated on STN: 20 Oct 2004

L6 ANSWER 11 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.
AB Trafficking of cholesterol in insects is a very important process due to the fact that insects depend on dietary cholesterol to fulfil their physiological needs. We identified a putative mosquito sterol carrier protein-2 (SCP-2) cDNA from fourth instar subtracted cDNA library. The

AeSCP-2 protein has high degree homology in the sterol transfer domain to both rat and human SCP-2. Transcripts of AeSCP-2 in fourth instars were detected strongly in the midgut, and weakly in the head and hindgut. In the early pupae, AeSCP-2 transcription was observed in the thorax, head and body wall of abdomen, but not in the gut. The interaction of mosquito sterol carrier protein-2 (AeSCP-2) with cholesterol was examined. The Kd of purified recombinant AeSCP-2 to cholesterol was 5.6+-0.6X10-9 M using radiolabelled cholesterol-binding assay. The results suggest that AeSCP-2 has high affinity to cholesterol and may function as a carrier protein in mosquitoes.

ACCESSION NUMBER: 2003:119677 BIOSIS
DOCUMENT NUMBER: PREV200300119677
TITLE: Isolation and expression of a sterol carrier protein-2 gene from the yellow fever mosquito, Aedes aegypti.
AUTHOR(S): Krebs, K. C.; Lan, Q. [Reprint Author]
CORPORATE SOURCE: Department of Entomology, University of Wisconsin-Madison, Madison, WI, 53706, USA
qlan@entomology.wisc.edu
SOURCE: Insect Molecular Biology, (February 2003) Vol. 12, No. 1, pp. 51-60. print.
ISSN: 0962-1075 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Mar 2003
Last Updated on STN: 5 Mar 2003

Considered

L6 ANSWER 12 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI LEVEL DIAGNOSIS OF CERVICAL MYELOPATHY USING EVOKED SPINAL CORD POTENTIALS.
AB The ESCPs (evoked spinal cord potentials) resulting from both median nerve and spinal cord stimulation were recorded from the interlaminar yellow ligaments posteriorly or intervetebral discs anteriorly on patients with cervical myelopathy in order to determine the most significnt lesion in the spinal cord electrophysiologically. The normal median-nerve-evoked spinal cord potential (MN-ESCP) consisted of P1N1 and N2(P2) deflections, while normal spinal cord-ascending evoked spinal cord potential (SC-AESCP) consisted of N1 and N2 deflections. The abnormal ESCPs obtained from 65 patients were classified into three grades. The spinal level recording the highest grade of ESCP, which was mostly positive wave, generally corresponded to the level that was clearly diagnosed as the main lesion by neurologic and radiologic examinations, such as a case of single level disc hernia. With these techniques, the level diagnostic rates of primary lesions were 94.7% in posterior recordings and 74.1% in anterior recordings.

ACCESSION NUMBER: 1989:96928 BIOSIS
DOCUMENT NUMBER: PREV198987051064; BA87:51064
TITLE: LEVEL DIAGNOSIS OF CERVICAL MYELOPATHY USING EVOKED SPINAL CORD POTENTIALS.
AUTHOR(S): SATOMI K [Reprint author]; OKUMA T; KENMOTSU K; NAKAMURA Y; HIRABAYASHI K
CORPORATE SOURCE: DEP ORTHOP SURG, SCH MED, KEIO UNIV, 35 SHINANOMACHI, SHINJUKU, TOKYO 160, JPN
SOURCE: Spine, (1988) Vol. 13, No. 11, pp. 1217-1224.
CODEN: SPINDD. ISSN: 0362-2436.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 6 Feb 1989
Last Updated on STN: 6 Feb 1989

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=> s (AeSCP-2 and agonist)
L8            0 (AESCP-2 AND AGONIST)

=>

=> s (AeSCP-2 and antagonist)
L9            0 (AESCP-2 AND ANTAGONIST)

=> s (AeSCP-2 adj agonist)
L10           0 (AESCP-2 ADJ AGONIST)

=> s (Sedes aegypti sterol carrier protein-2) adj (agonist)
MISSING OPERATOR ROTEIN-2) ADJ
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> d his

     (FILE 'HOME' ENTERED AT 09:59:31 ON 01 AUG 2006)

     FILE 'MEDLINE, BIOTECHDS, BIOSIS, WPIDS, FSTA, JICST-EPLUS, HCAPLUS,
     EMBASE, DGENE' ENTERED AT 10:00:21 ON 01 AUG 2006
L1            23 S (AEDES AEGYPTI STEROL CARRIER PROTEIN-2) OR (AESCP-2)
L2             0 S L1 AND (ACTIVATOR)
L3             2 S L1 AND (INHIBITOR)
L4             8 S L1 AND (AGONIST)
L5             8 S L1 AND ANTAGONIST

     FILE 'SCISEARCH' ENTERED AT 10:03:34 ON 01 AUG 2006
                E LAN,QUE/AU

     FILE 'MEDLINE, BIOSIS' ENTERED AT 10:04:21 ON 01 AUG 2006
                E AESCP-2
L6            12 S E2
L7             1 S AESCP-2+NT/CT
L8             0 S (AESCP-2 AND AGONIST)
L9             0 S (AESCP-2 AND ANTAGONIST)
L10            0 S (AESCP-2 ADJ AGONIST)

=> s Aedes aegypti sterol carrier protein-2/CT
L11           1 AEDES AEGYPTI STEROL CARRIER PROTEIN-2/CT

=> d l11 ti abs ibib tot

L11  ANSWER 1 OF 1  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
TI   Subcellular localization of the mosquito sterol carrier protein-2 and
     sterol carrier protein-x.
AB   Subcellular distribution of Aedes aegypti sterol carrier protein-2
     (AeSCP-2) and AeSCP-x was studied using electron microscopy.  In both
     cultured A. aegypti cells and in the larval midgut, AeSCP-2 was detected
     mostly in the cytosol, with some labeling mitochondria and nucleus, but
     not in membranous vesicles.  The widespread distribution of AeSCP-2 in the
     midgut epithelium is consistent with its potential lipid transfer function
     in all phases of cholesterol absorption.  In contrast, AeSCP-x was found
     mostly in the peroxisome.  Differences in the subcellular distribution of
     AeSCP-2 and AeSCP-x suggest that these two members of the SCP-2 gene
     family are functionally distinct.  Overexpression of AeSCP-2 in A. aegypti
     cells showed increased localization of AeSCP-2 to cytosol, mitochondria,
     and nucleus.  This is the first report on the nuclear distribution of an
     SCP.  Overexpression of AeSCP-2 resulted in increased cholesterol
     incorporation in cells, suggesting that AeSCP-2 enhances cholesterol
     uptake.-Lan, Q., and R.  J.  Massey.  Subcellular localization of the
     mosquito sterol carrier protein-2 and sterol carrier protein-x.
```

ACCESSION NUMBER: 2004:404206 BIOSIS
DOCUMENT NUMBER: PREV200400408392
TITLE: Subcellular localization of the mosquito sterol carrier protein-2 and sterol carrier protein-x.
AUTHOR(S): Lan, Que [Reprint Author]; Massey, Randall J.
CORPORATE SOURCE: Dept Entomol, Univ Wisconsin, Madison, WI, 53706, USA
qlan@entomology.wisc.edu
SOURCE: Journal of Lipid Research, (August 2004) Vol. 45, No. 8, pp. 1468-1474. print.
CODEN: JLPRAW. ISSN: 0022-2275.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Oct 2004
Last Updated on STN: 20 Oct 2004

Refine Search

Search Results -

Terms	Documents
L6 and (AeSCP-2)	0

Database:
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DB=USPT; PLUR=YES; OP=OR			
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L5	L2 and AeSCP-2	0	L5
L4	L3 and AeSCP-2	0	L4
DB=PGPB; PLUR=YES; OP=OR			
L3	lan.in.	764	L3
DB=USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L2	lan.in.	3146	L2
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☐ 1. Document ID: US 20040211865 A1

L1: Entry 1 of 1 File: DWPI Oct 28, 2004

DERWENT-ACC-NO: 2004-765537
DERWENT-WEEK: 200475

TITLE: Novel isolated and purified Aedes aegypti sterol carrier protein-2 polypeptide or its fragment capable of intracellular cholesterol transport, useful for identifying agonist or antagonist of biological activity of polypeptide

INVENTOR: KREBS, K C; LAN, Q

PRIORITY-DATA: 2003US-465648P (April 25, 2003), 2004US-0823203 (April 13, 2004)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20040211865 A1	October 28, 2004		023	G01N033/53

INT-CL (IPC): G01 N 33/53

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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